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REPRINTED FROM THE

JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

FOR JUNE, 1895.



RECURRENT ZOSTER.*

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IT has long been known that zoster, in the vast majority of instances, occurs once only in the lifetime of the individual.

Exceptions to this law have, however, from time to time been noted. It is my intention in this paper to give a brief notice of as many of these as I have been able after a diligent search to gather, to classify them according to what seemed the most natural method, and in this way possibly to facilitate a better understanding of their ætiology and pathology.

Those dermatoses which depend for their causation on alterations in the nervous system are perhaps the most interesting because the most obscure, and among these zoster stands as a type-form. A study of those cases which depart from the usual type may perhaps—paradoxical though it seem—throw most light on the questions at issue in regard to this disease, inasmuch as it permits us to shift somewhat our point of view from its accustomed place, and because, through the rifts these cases present in the usual symptomatology, there may penetrate some ray on a dark subject.

It was found necessary, in order to conduct any approach to a complete survey of the subject, to include in it cases reported under the title *chronic zoster*. These naturally belong to the same class, and it would be difficult to draw a dividing line between them and cases of frequent recurrence. In fact, the majority of “chronic” cases are made up of overlapping crops of vesicles, and therefore really present no essential difference.

I have also included certain cases of recurrent bullous manifestations which seemed to differ from the commoner form only in the size

* Read before the American Medical Association, Section on Dermatology and Syphilography, Milwaukee, June, 1893.



of the lesions, a circumstance that does not afford ground for a generic differentiation.

It might readily be objected that a number of the cases collated are not zoster in the true sense of the term. With this objection I should be the first to agree. Indeed, as I shall have occasion to explain later, I incline to the way of thinking of those who, like Hardy,¹ for example, object to giving the name of *zona* to *zoniform* diseases occurring after traumatism and in other ways.

I shall arrange the cases as follows:

Group 1. "Chronic zoster" (usually limited to one site).

Group 2. Cases recurring several times or frequently.

Subgroup A. Frequent recurrences at same area.

Subgroup B. Several recurrences, at varying sites.

Subgroup C. Several recurrences at the same and again at a distant site.

Subgroup D. Several recurrences, sites not definitely stated.

Group 3. Single recurrences.

Subgroup A. At same site.

Subgroup B. At a distant site.

Subgroup C. At a site not definitely stated.

Group 4. Zoster gangrænosus recidivus atypicus hystericus.

Group 1.—"CHRONIC ZOSTER."

Of the eight cases collated under this head the last two were of traumatic origin. Three (Leudet's first two cases and von Baerensprung's) were in phthisical subjects, and a direct connection can be traced between the tubercular deposit and the herpes.

Case I.—Burserius² (*old woman; herpes below left scapula, lasting several months; burning pain and neuralgia.* Quoted by Rayer).

"Zoster acutus et brevis ut plurimum morbus est; nam quamquam Lorryus et chronicum, et interdum epidemicum esse existimet . . . hanc speciem tamen diutinam non vidi, nisi semel in vetula, quam stigmata pustularum sub omoplate sinistra ad aliquot menses summo cruciatu atque ardore pertinaciter divexarunt."

Unfortunately, I could not gain access to Lorry's chronic case or cases referred to by Burserius.

Case II.—(Leudet's³ first case. *Phthisical woman; left intercostal herpes resulting in ulceration lasting two months.*)

Woman aged forty-five. Slow phthisis for several years; consolidation with some softening of the right apex. Considerable involvement of upper half of left lung. Herpes between fourth and sixth ribs of left side, extending forward to axilla, which left ulceration bearing moist

crusts and surrounded by violaceous areola with infiltration. These were present at the end of two months. There were frequent exacerbations of pain accompanied by increase of secretion from the ulcerated surfaces. Entire involved area anæsthetic.

Case III.—(Leudet's second case, *loc. cit.* *Phthysical woman; left intercostal herpes resulting in ulceration lasting six months.*)

Consolidation of both apices. Herpes between the third and fifth ribs of the left side. The resulting ulceration, crusting and infiltration continued as long as the patient remained under observation, a period of six months. Partial anæsthesia.

In the two preceding cases the seat of the herpes coincided with that part of the lung most involved.

Case IV.—(*Von Baerensprung's* celebrated first case.)

Phthysical child. Intercostal herpes. Relapse of ulceration two weeks after first healing. Death. *Post-mortem* showed extension of process from adjacent lung to spinal ganglia of involved nerves and portions of nerves issuing from ganglia.

Case V.—Jewel.^o

Femoral zoster preceded by violent uterine pains. The uterine trouble being cured, the zoster disappeared.

Case VI.—Milton^o (*bilateral herpes of face in boy, continuing with frequent exacerbations for over six years.*)

Boy, showed vesicles on the cheeks soon after an attack of typhus. From that time and until he passed from observation—in all, six years and three months—was never free from them. A fortnight never passed without some vesicles appearing, and generally a distinct relapse, so that the condition was made up of overlapping attacks. They were always preceded by stiffness, burning and itching of the skin. The vesicles varied in number from eight or ten to twenty or thirty. They were all flat and some umbilicated. The general health remained excellent. The following was noted on the presentation: On the ears were scabs, while from ear to ear stretched a broad, irregular band of scattered vesicles and cicatrices. This band was an inch broad where it crossed the bridge of the nose, but farther back it extended to the angle of the jaw. The upper margin lay just below the eye. The vesicles were in all stages—some perfect, some having concreted into crusts, firm and brown.

Milton (*loc. cit.*) also refers to the case of a man who “suffered from herpes of the face for eighteen months.” This observation is evidently too meager to be of use.

Case VII.—Duhring⁷ (*dermatitis vesiculosa neurotraumatica of forearm*).

Hysterical woman, aged twenty-nine, was burned on *flexor* surface of the left forearm over an area size of a silver dollar. Healed slowly and a month later broke out anew, showing a gangrenous patch which remained six weeks. The patch and the whole forearm became reddened, swollen, and tender, and the site of throbbing pain. This symptom continued to recur every few weeks. About six weeks after the accident there appeared a vesicle on the *extensor* surface. This ulcerated and crusted and other papulo-vesicles, vesicles, and blebs appeared near it, until the lower half of the forearm was involved and encircled by the disease, consisting of a chronically inflamed, vesicular and bullous, herpetic-looking, more or less crusted, scarred patch. "It possessed at first sight the general appearance of an injury due rather to the local action of an acid, or to some chemical substance, than to disease from within . . . The crusts were depressed, saucer-shaped, and adherent to the skin in the center, with everted edges. They were variegated in color with bluish or blackish tints." Eighteen months after the accident the condition persisted with but slight alleviation.

The resemblance of this case to Kaposi's *zoster gangrænosus recidivus atypicus hystericus* is striking, and consists in the presence of gangrene, in the appearance of the lesions as though produced by a cauterant, in the appearance of new lesions in the neighborhood of old ones, in the successive exacerbations, and in the presence of hysteria. On the other hand, it differed in being continuous, in the extent of territory involved, in the absence of a centripetal march, of a circinate arrangement, and of a keloidal appearance of the resultant scars.

The natural suspicion that the lesions were self-inflicted by the use of a cauterant, in this case as well as in Kaposi's, is negated by the standing of the observers who assure us to the contrary.

Case VIII.—Galton⁶ (*traumatic neurosal pemphigus*). Quoted by Dühring, *loc. cit.*

Girl, aged seventeen, epileptic. Accidentally chopped off distal phalanges of index and ring fingers, and cut through middle phalanx of middle finger. Wounds remained open three months. Shortly afterward patches of redness, followed by blebs, appeared on the left wrist, hand, and arm. The eruption would spread rapidly, so that sometimes within a quarter of an hour the whole hand and arm would be covered with blebs. Fourteen months after the accident a crop appeared on the left leg. A month later she had a slighter return of vesicles, and since, for the next two years, only occasionally a few vesicles. They were in patches on both surfaces of the forearm in the area of the median and ulnar nerves.

Leudet's third case (*loc. cit.*) seems hardly worthy of the name of

chronic. At all events, the facts given are too few to give it much scientific value.

Of the cases included in this group Milton's is the only one showing a bilateral distribution, and Galton's the only one in which there occurred a manifestation at a distant site. As I am forced to admit that there are other points in which it does not accord with the general characters of the group, I may formulate the following general law: *Zosteroids presenting overlapping crops remain limited to one nervous area.*

I shall give later my reasons for using the word *zosteroid*.

Group 2.—CASES RECURRING SEVERAL TIMES OR FREQUENTLY.

Subgroup A.—*Frequent recurrences at the same area.*

Case IX.—Hitherto unpublished (*recurrent patch on forearm*).

Woman, aged thirty-nine, presented herself at my clinic at the St. Louis Medical College. Thirteen years ago she noticed on the inner aspect of the forearm, two inches and a half above the head of the ulna, a little red spot crowded with pinhead-sized, firm pustules. This was preceded by pain down the inner border of the forearm, hand, and little finger to its extremity. The outer border of the latter was never affected. In three or four days, when the eruption was well out, the pain subsided. This has occurred every five or six months since, the eruption occupying each time the same identical spot. The last attack was more severe than any of the preceding, and left a scar, which is depressed, violaceous, and about half an inch in diameter.

Case X.—Gibson⁹ (*single recurrence of small patch on the forearm*).

Man, attacked during winter months of two successive years by a patch of herpes preceded by severe neuralgic pains, and strictly limited to a small area on the back of the forearm supplied by one of the minute dorsal branches of the left ulnar nerve. A singular coincidence was that his daughter had a precisely similar affection at a precisely similar spot, but on only one occasion.

Although this is a case of single recurrence, I have placed it here, as it is apparently most nearly related to the cases which precede and follow it.

Case XI.—Blaschko¹⁰ (*"herpes digitalis"; frequent recurrence, on index*).

Grouped vesicles on an inflamed base limited to right index. They are split-pea-sized and deep-seated; do not tend to rupture. If not punctured, a lymphangitis extending up the arm with axillary ade-

nopathy results. They are preceded by itching, burning, and neuralgia of the affected finger and back of hand. Condition had existed two years, at first with intervals of three or four months, but later of six or eight weeks. Vesicles varied in number from two to fifteen. Attacks average two weeks in duration. No scarring.

The three cases just quoted have much in common. The next departs from their type, but like them was limited to the upper extremities.

Case XII.—Bayet¹¹ (*several recurrences on hands and wrist; lesions bullous and later gangrenous, at first bilateral; hysteria*).

Hysterical girl, aged eighteen. Bullous eruption, both hands, healing in a month; no precursory pains. Five months later pain and formication in right arm and forearm, followed in five hours by bullæ on dorsum of right hand. These gave way to superficial ulcerations with brown, dry, hard crusts, often becoming greenish. The gangrene did not extend much below the papillary body. Nerve trunks tender. Dorsal surface of hand, entire forearm and arm, except deltoid region, presented a painful tactile and thermic anæsthesia. The palm preserves the tactile sense, but is insensible to pain. Paresis of extensors of hand. Twelve days later new patch on anterior surface of wrist.

This case presents three points of resemblance to Kaposi's well-known cases, viz., hysteria, recurrence, gangrene.

Case XIII.—Weiss, quoted by Crocker¹² (*frequent recurrences over median tract, bilateral; bullous; motor, trophic, and secretory disturbances*).

Symmetrical zoster affecting branches of the median, recurring at intervals, and producing trophic disturbances of the skin and nails supplied by the median nerve, and thumb clonus. The eruption was bullous and accompanied by dysidrosis and followed emotional disturbances.

Case XIV.—Tilbury Fox¹³ (*several recurrences at trunk, gluteals, and penis*).

Man, aged thirty-three. Every June, for three successive years, there appeared a band of vesicles passing from front to back over the point of the right shoulder, with herpes of the gluteals and penis.

The occurrence of lesions on the right gluteals in this case constitutes a point of resemblance to the next three cases in which the lumbar and sacral regions were involved.

Case XV.—Von Düring¹⁴ (*frequent recurrences; femoral, alternating occasionally with herpes of penis*).

Man, aged twenty-three. An attack of erysipelas (?) and four attacks of "pseudo-erysipelas" were followed by herpes, which recurred

at intervals of six weeks for six years, and at the date of report still continued. The patch, hand-sized or smaller, was below the left trochanter. Sometimes preputial herpes seemed to take the place of the femoral attack.

Case XVI.—Hartzell¹⁶ (*frequent recurrences ; femoral and sacral, occasionally bilateral*).

Man, aged forty-five. First attack on inner and upper part of right thigh. Three weeks later, over sacrum. Continued to occur at intervals of three weeks or four for a year or more. On several occasions, and when on sacrum, was bilateral. There were two more recurrences after intervals of one and two and a half years.

This case may not be thought to belong to the subgroup of recurrences at the *same* site, but that the eruption was here really confined to one nervous area is evident when we remember that the skin over the sacrum is supplied by the posterior branches of the three upper sacral nerves, while their three anterior branches go to form the sacral plexus, of which the small sciatic, with its cutaneous twigs, supplying in part the upper inner aspect of the thigh, is a branch.

Case XVII.—Bertholle¹⁶ (*frequent recurrences with marked neuropathic complications ; herpes labialis and præputialis*).

Man, aged forty-eight, himself a physician. In early life he frequently had herpes labialis, but on reaching the age of twenty the site of eruption changed and he had frequently recurring herpes præputialis. At thirty, vesicles on the nates with neuralgia of inferior extremities. From thirty to thirty-five, herpes was less frequent on prepuce, but more so on the nates. At the same time appeared attacks of nocturnal asthma, alternating with sharp pains in one shoulder, shooting toward the scapula. At thirty-five appeared hemicrania with a neuralgic affection of the bladder. From this time his headaches came on about every two months, and were invariably followed by herpes of the nates. They were accompanied by a regular cycle of nervous phenomena terminating with the herpes as with a crisis, and always occupying one week. At the date of the report the attacks had become more frequent, there having been eight in seven months. The number of patches varied from one to six. The headache was always on the right side and the pain on the left, corresponding to the decussation of fibers at the medulla.

This case suggested to Bertholle the introduction of a new clinical term, "*herpès récidivant de la peau*." This is included in Bazin's "*herpès successif chronique de la peau*," which Besnier and Doyon¹⁷ described as an eruption which may occur on any point of the skin. The sites of election are the cheeks, chin, alæ nasi, ears, buttocks, internal aspect of thigh, and palm. It is almost always solitary,

sometimes abortive, often neuralgic, irritative, and painful. There may be adenopathy. Frequently relapses and reappears at the same points.

Bertholle's case and those of von Düring and Tilbury Fox just cited, as well as Elliot's, to be mentioned later, point to the relations existing between recurrent zosteroids and h. præputialis, the connecting link being furnished by Mauriac's "*herpès névralgique des organes génitaux*"¹⁸ (*herpès génital récidivant zostéroïde; herpès progénital, type Diday et Doyon*). A consideration of this interesting affection and the many hints it affords would be most instructive in this connection, but would lead us too far.

The next six cases presented lesions limited to the face and neck. In the two following the recurrences were frequent and limited to one side:

Case XVIII.—Hitherto unpublished (*frequent recurrences limited to first two branches of fifth nerve*).

Boy, aged seven, presented himself at my clinic at the St. Louis Medical College. He was the son of the woman who furnished Case IX. Over the areas of distribution of the supratrochlear and nasal branches of the first division and of the temporo-malar and infra-orbital branches of the second division of the fifth nerve on the left side were groups of herpetic vesicles and pustules. The palpebral and ocular conjunctiva of the same side was much injected. His pulse was 112 and his temperature 102°. The vesicles had then been out three days and were preceded for two days by pain over the region involved. His mother stated that at the age of six months he had had a patch just below the orbit and that this had since recurred every five or six months, so that he had had some thirteen or fourteen recurrences in all, and all limited to the same side. It had never spread beyond the area of the infra-orbital until the attack which I witnessed.

Case XIX.—Jamieson¹⁹ (*frequent recurrences, right cheek*).

"A lady, aged twenty-six, suffered from an eruption of vesicles in groups running transversely across the right cheek, each attack being preceded by pain. This repeated itself many times at intervals."

Case XX.—Behrend²⁰ (*phthisical boy, several recurrences on face, once bilateral*).

Boy; had phthisis; mother died of same; a sister has had zoster. Patient had had nausea, vomiting, and headache for a month when herpes appeared over the first, second, and third branches of the fifth nerve on the left side and over the first and second on the right.

Pulse 100, with no elevation of temperature. This was in January of 1887. Behrend observed two attacks before this: one, February,

1883, over the third branch of the fifth, left; and one in November, 1884, on the ear. Patient stated that he had had several attacks before these.

This case, as well as Bertholle's (XVII) and mine (XVIII) illustrate the tendency of frequently recurring zosteroids finally to invade neighboring branches. The following also shows the same thing:

Case XXI.—Hallopeau and Barrié²¹ (*several recurrences on face, once bilateral*).

Bilateral herpes of face in groups on ear, malar region, upper eyelid, nose, upper lip, and lower lip, opposite mental foramen, on right side. The right eye is injected and presents a small ulceration of the cornea. On the left side are two small groups on the malar region and on the cheek. The eruption was preceded by intense headache, which still persists, general aching, chills, and fever. No anæsthesia. The patient has already had several crops of discrete herpes, sometimes on the lip, and again on the right ear or nose.

Case XXII.—Elliot²² (*several recurrences, bilateral, on neck*).

Man, aged thirty-nine; zoster on the left side of neck and eight days later on right side. Two months later again on left side, followed in two days by lesions on right. After a month a similar attack, and again a month later herpes on right side of penis and corona glandis.

Case XXIII.—Hardaway²³ (*frequent recurrence, bilateral, neck*). Compare Case XXII.

Old man. A patch of vesicles every few weeks on each side of neck; one side would perhaps precede the other by a day or so. The lesions were arranged just as in zoster, and the subjective symptoms were similar. This continued for years (some of these particulars are not to be found in the reference given, but were communicated orally).

The remaining cases of this subgroup, all but the last three, owned a traumatic origin. In the first two (Cases XXIV and XXV) the injury was centric, in the next (Case XXVI) it bore upon the trunk of the nerve supplying the affected area; in Case XXVII the injury was to a distant site, the causal connection being doubtful. In Case XXVIII the traumatism was peripheral, upon the site occupied later by the eruption, while the last three (Cases XXIX, XXX, and XXXI) were due, it would seem, to a continued peripheral irritation.

Case XXIV.—Kopp²⁴; blow on the head; facial zoster, left side; seventeen attacks in five years; marked scarring.

Case XXV.—Nieden²⁵ (*trauma to cervical vertebrae; frequent recurrences of ophthalmic herpes with sensory, motor, and secretory disturbances; adenopathy*).

Man, aged twenty-eight. Fracture of transverse processes of second, third, and fourth cervical vertebræ, with infiltration involving neighboring structures. Attacks of pain similar to that described below every two years. Reporter first saw patient six and a half years after injury. Had intense boring pain in left half of skull, conjunctivitis, blepharospasm and myosis resisting atropine on that side. Great tenderness on pressure of bulb in neighborhood of ciliary body. Hyperæsthesia of nasal and oral mucous membrane and skin of face on left side. Redness of that side, with paroxysms of perspiration twice daily, most marked on forehead and when pain was most intense. Sense of heat limited to same side. On the fourth day appeared herpes of left side of forehead, nose, and both left lids. Cornea much injected. Less pain. Next day appeared vesicles on conjunctiva and cornea and reaction to atropine returned. Nasal secretion increased. Hyperæsthesia gradually gave way to anæsthesia. Cervical and submaxillary glands swollen.

Similar but milder attack a year later. The nose this time not involved and the eyes less so. After another year a reproduction of the first attack, with unilateral ptialism and hyperidrosis. Scarring.

The following year a mild attack; eye uninvolved. Still a year later severe headache, with ocular irritation, followed after a few days by a few vesicles on forehead, nose, and cornea. After again a year a recurrence as severe as the first or third, which left ulceration and scarring and marked anæsthesia. With each attack was noted præcordial anxiety and tachycardia. (Compare Case XX.)

Nieden thinks he can safely say that the upper cervical sympathetic ganglion was here involved.

Case XXVI.—Charcot²⁶ (*trauma to nerve trunk; several recurrences*).

Gunshot wound of thigh followed by neuralgia beginning at scar and following nerve distribution to foot. Involved area was on several occasions the site of grouped vesicles, "tout-à-fait semblables à celles d'un herpès zoster."

Case XXVII.—Wilson,²⁷ puncture of right hand. Three or four weeks later blebs on left thigh, recurring frequently for a year and a half. They were preceded by feverishness and a local scalding sensation.

It may be doubted whether the trauma and herpes were more than a coincidence. This case recalls one of Verneuil's, quoted by Leudet (*loc. cit.*), in which there was labial and guttural herpes, relapsing several times after scraping the cervix for epithelioma. The case does not seem worthy of more than this passing notice.

Case XXVIII.—Kaposi; Besnier and Doyon's edition, vol. i, p. 450 (*several bullous recurrences, peripheral trauma*).

"A girl of twenty had had for several weeks bullous eruptions over right mamma accompanied with sharp neuralgic pains." She had been bitten by a horse on the mamma.

Case XXIX.—Crocker (*loc. cit.*): "I have seen recurrent herpes round the sinus produced by a diseased tooth."

Case XXX.—Pearse Gould, quoted by Crocker, *loc. cit.* Recurrent herpes about a carious rib.

Case XXXI.—Ehrmann,²⁸ bullæ over region of fifth nerve, recurring from time to time. A carious tooth on the same side. When this was removed the eruption appeared bilaterally.

Subgroup B.—*Several recurrences, at varying sites.*

Case XXXII.—Wallis²⁹ (*trauma; herpes, twice bilateral*).

Woman, aged sixty-five. Four years after a fall injuring the back, had zoster over left deltoid. Thirteen months after, over sixth, seventh, and eighth intercostals, "and, as this eruption was disappearing, a fresh crop of vesicles showed itself on the outside of *both* thighs and legs." A year later had another attack over left intercostal and both scapular regions.

Case XXXIII.—Kaposi³⁰ (*pemphigus neurotico-traumaticus [hystericus]*).

Female, aged twenty-two, wounded nail-fold. In a few days blebs appeared on the dorsal surface of the middle finger, and a few days later on the dorsum of the hand and the wrist. Four weeks after the accident there existed a reddened painful patch, hand-sized, covered with blebs. Immediately afterward blebs appeared in other localities, preceded by pain in the affected part, followed in two or three hours by redness, upon which formed wheals followed by blebs, pea to egg sized.

It must be admitted that this case departs widely from the accustomed characters. In the rapidity of formation of the lesions it recalls Galton's case (VIII). Kaposi thinks that the peripheral stimulus was here transferred to the general vaso-motor system.

Cases XXXIV and XXXV.—Kaposi, in Besnier and Doyon's second edition, vol. i, p. 443.

"I know through a verbal communication from two subjects, one of them a physician, that there had occurred in their persons several recurrences of zoster, in the region of the crural and in that of the genital nerves."

The language leaves one in some doubt as to whether both regions were affected in each case.

Subgroup C.—Several recurrences at the same and again at a distant site.

*Case XXXVI.—Mackenzie*²¹ (doubtful).

Multiple symmetrical zoster (?), affecting the face, chest, axilla, shoulders, and thighs, accompanied with tenderness along the spine and severe neuralgia. Was to some extent recurrent.

Although I have included this case for the sake of completeness, I question whether it was in any sense a zoster.

Subgroup D.—Several recurrences; sites not definitely stated.

Case XXXVII.—Leloir, quoted by Besnier and Doyon in their second edition of Kaposi, vol. i, p. 445.

Physician, aged sixty-three, has vitiligo. Had ten attacks of intercostal zoster.

Case XXXVIII.—Hardaway, *loc. cit.* and verbal communication.

Three recurrences at long intervals in a boy.

Of the thirty cases in Group II, only one, Wallis's (XXXII), definitely shows recurrences affecting distant areas, for in Cases XXXIV and XXXV the exact distribution is not stated with sufficient clearness, in Cases XXXVII and XXXVIII it is not given at all, while it is doubtful whether Cases XXXIII and XXXVI should be at all included in the list. This leaves the twenty-three cases of Subgroup A with "frequent recurrences at the same area." Of these, thirteen were strictly limited to one site, and in seven more the corresponding region of the opposite side was affected. In Tilbury Fox's case, a distant site, the gluteals, was involved, but simultaneously. In this case, in Elliot's, and in two others, there was also præputial herpes; preceding the zosteroid in Bertholle's case, accompanying it in Fox's, alternating with it in von Düring's, and following it in Elliot's.

We may therefore formulate the following general law:

Zosteroids of frequent recurrence remain limited to their original site or to the corresponding opposite region.

(Wallis's case presents the only definitely established exception.)

To which we may add the following: *Recurring zosteroids due to traumatism or to continuous peripheral irritation remain limited to one site.*

Group 3.—SINGLE RECURRENCES.

Subgroup A.—At a distant site.

Case XXXIX.—Leudet's fourth case, *loc. cit.*

Epileptic, had saphenous thrombosis, cardiac disease and hæmaturia. Zoster on one side of chest four years after its appearance on the other.

*Case XL.—Bossion*³² (*zoster of face and trunk, nine years later on opposite side of trunk*).

Man, aged fifty-four. In 1881 had a vesicular eruption on right side of face and trunk which got well in three weeks. In 1890 was seen by reporter with a zoster along the fourth, fifth, and sixth ribs, extending from the spine to the sternum on the left side.

*Case XLI.—Fabre*³³ (*traumatic?*).

Man, aged sixty-eight, diabetic. Thigh bruised by a fall. Lumbo-femoral zoster on right side. Sixteen months later had pain under left scapula, followed in nine days by herpes at that point.

It may be questioned whether the trauma in this instance played a causative rôle. One or both of the attacks may have been "idiopathic."

Subgroup B.—At the same site.

*Case XLII.—Wyss*³⁴ (*lumbo-abdominal zoster repeated after thirty years*).

Man, aged sixty-six. Zoster lumbo-abdominalis. Stated that he had had the same affection at the same site thirty years before. Over a site corresponding to the nervous distribution and scattered between the new lesions were numerous cicatrices.

*Case XLIII.—Kennedy*³⁵.

Man, thoracic zoster, repeated after twenty-five years.

*Case XLIV.—New Sydenham Society's Atlas*³⁶.

In Plate XXIII typical herpes zoster is seen on the right side of the thorax to coexist with scars of a previous attack (male patient).

The last six cases, if they were instances of true recurrent zoster, which there seems no good reason for doubting, are perhaps the only ones recorded in this paper. All were men. The three whose ages were given were fifty-four, sixty-six, and sixty-eight years old. The intervals were of sixteen months, four, nine, twenty-five, and thirty years.

*Case XLV.—R. W. Taylor*³⁷.

"I once saw a case in which there were two successive attacks of herpes of the trochlear branch of the fifth nerve, the vesicles being seated in a direct line an inch long on the right side of the nose."

Subgroup C.—Site not stated.

Case XLVI.—Mauriac, loc. cit., p. 514.

Incidental mention in a foot-note of a woman who had two attacks of zoster.

Cases XLVII and XLVIII.—Stern and Fr. Skabell, quoted by Kaposi (Besnier and Doyon, second edition, vol. i, p. 443) as having seen zoster twice in the same individual. I have not access to the original papers.

Case XLIX.—Hutchinson, quoted by Pye-Smith.³⁶

“In a series of a hundred cases collected by him there was only one in which there was any history of a previous attack.”

Cases L, LI, LII, and LIII.—Pye-Smith, *loc. cit.* “In one hundred cases under the writer’s care no fewer than four of the patients gave a history of a previous attack of the same disorder, and two of them showed scars which confirmed the statement.”

Cases LIV and LV.—Hardy, *loc. cit.*: “I have seen only two examples of zona occurring twice in the same person.”

Group 4.—ZOSTER GANGRENOSUS RECIDIVUS ATYPICUS HYSTERICUS.

The cases constituting this type, to which Kaposi has given the name which appears above, present many marked points of difference which separate them from other zosteres or zosteroids, and justify their being placed off by themselves as a separate clinical, if not pathological, entity.

These points are as follows:

First. The presence of hysteria.

Second. Recurrence.

Third. The extent of nerve area involved.

Fourth. A centripetal march of the eruption, appearing first over peripheral branches and gradually extending toward the center by successive crops.

Fifth. Circinate arrangement of the vesicles, new rings forming about old ones.

Sixth. Gangrene, and peculiar appearance of the resulting crusts, looking as though produced by a cauterant chemical.

Seventh. Keloidal appearance of resulting scars.

Case LVI.—Kaposi³⁷ (*eleven crops*).

The crops were as follows:

Z. cerv. brach. dexter:

First crop, April 22 to May 1, 1874.

Second crop, June 25 to July 10, 1874.

Third crop, January 15 to January 22, 1875.

Fourth crop, June 5 to June 9, 1875.

Fifth crop, October 21.

Z. sacro-crur. et ischiadicus dexter:

Sixth crop, December 8, 1875.

Z. cerv. brach. sinister:

Seventh crop, December 18 to December 26, 1876

Eighth crop, January 30 to February 1, 1877.

Z. cerv. brach. dexter :

Ninth crop, April 21, 1877.

Tenth crop, June, 1878 (limited to shoulder, abortive).

Z. brach. sinister :

Eleventh crop, September 14, 1878.

The brachial plexus in the supraclavicular fossa on the affected side was swollen and tender to pressure, the pain extending to the elbow. There was probably a continuous inflammation of these nerve bundles.

Case L VII.—Kaposi, *loc. cit.* (*single recurrence*).

Girl, aged twenty-four. Z. brach. sinist. Same form as first case, miliary, in groups, circinate. Rapidly gangrenous. Marked neuralgia. The first attack, three years before, had left keloidal scars.

Case L VIII.—Kaposi, *loc. cit.* (*four crops*).

Girl, aged sixteen. First crop, December 11, 1878, on both surfaces of left wrist.

Second crop, January 13, 1879, over left mamma.

Third crop, February 12, 1879, over left mamma.

Fourth crop, February 20, 1879, over forearm.

Case L IX.—Kaposi⁴⁰ (*frequent recurrences*).

Woman, aged twenty-seven, since age of twelve has had almost yearly recurrences, lasting several days. When exhibited, case presented vesicles with sunken crusting centers over the mamma and sternum. In other parts of both mammae were crusts. Over the stomach and abdomen were white scars, and farther down an affected patch, reddened, and showing in places, through the intact epidermis, necrosis of the corium.

Case L X.—Dontrelepont⁴¹ (*acute multiple gangrene*).

Woman, aged twenty-one, stuck herself under the left thumb nail. Gangrenous patches of left upper extremity, later extending to its opposite fellow. After a while, vesicles and blebs appeared on the patches. During the next five years, and up to her death, all parts of the skin, as well as mucous membranes of the respiratory tract, conjunctivæ, and vagina, were affected. Bronchitis, pneumonia, and tuberculosis followed.

Dontrelepont thinks this a universal herpes zoster gangrænosus.

Case L XI.—Kopp.⁴² A case of generalized pemphigoid eruption followed a burn on the hand, which Kopp thinks an instance of this affection.

Under the caption "Un caso non mai osservato di zoster cronico," Tanturri⁴³ reports a case of cutaneous disease lasting four years, and characterized by groups of ulcerating and crusting lesions. A careful

perusal of this paper fails to convince one that the case possessed anything in common with zoster besides the grouping.

This concludes this rather tedious enumeration of cases. I also in my reading met with references to similar instances in Rayer and Henoch, but failed of access to them.

To sum up, it would seem probable that frequently recurring and "chronic" (overlapping) zosteriform eruptions (excluding for the present Kaposi's gangrenous type) find their cause in one of the conditions named below :

1. Chronic peripheral irritation.
2. Traumatism : *a*, central ; *b*, in continuity ; *c*, peripheral ; *d*, reflex.
3. Pressure on a nerve trunk (osteophytes, infiltration of surrounding tissues, pleuritic adhesions).
4. Infiltration of a nerve or ganglion by some neoplasm or a simple and (in this regard) non-specific inflammation.
5. The presence in the blood of some irritating substance, such as lactic or uric acid (*arthritisme*).

These eruptions may be called *zosteroids*, inasmuch as they differ from zoster in some points and resemble it in others, and should be classed with herpes vulgaris, whether facial or progenital.

Gerhardt has enunciated the theory that h. facialis is a form of zoster, and Mauriac holds the same view with regard to h. progenitalis. In fact, von Baerensprung seemed to think that the first was an abortive form of zoster of the fifth pair, and the last a rudimentary zoster of the sacro-ischiadicus.

I believe, as I have said above, that it is nearer the truth to class together the zosteroids and h. vulgaris, both owning in all probability a similar pathology and both exhibiting the phenomena of recurrence, limitation to one nerve area, and frequently bilaterality, features foreign to true zoster.

True zoster, on the other hand, is a well-marked clinical and, we believe, pathological entity, pursuing a regular cyclical course and ending in speedy recovery ; a disease which Erb is to all appearances right in viewing as a specific zymotic exanthem ; one which, like them, confers immunity, the exceptions to this law being so few as hardly to merit consideration, and probably forming no larger proportion of the whole than can be found in any exanthem—variola, for example.

In fact, of the sixty-one cases here enumerated, perhaps only six are recurrences of true zoster.

Lesser,⁴⁶ however, seeks to account for the rarity of well-established recurrences of the so-called idiopathic form by the relative in-

frequency of the disease, and by the difficulty of fastening upon an individual the definite proof of the former existence of a disease which often leaves no characteristic trace, and which may have occurred many years anterior to the second attack; in other words, that its non-recurrence is only in appearance, "*nur eine Scheinbare sei.*"

His position, as has been seen, is not borne out by the researches reported in this paper.

Kaposi's gangrenous form is evidently a separate disease, the further elucidation of which must be left to the future.

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